REMARKS

Claims 1 to 15 are pending in the application. Claims 1-15 stand rejected under anticipation obviousness and/or indefiniteness grounds.

Specifically, claims 1-5, 7-10 and 12 stand rejected as being anticipated by Kitamura et al. (EP 11202028). Claim 6 stands rejected as being obvious over Kitamura et al (EP 1120281) in view of Ashida et al. (JP 2001-096900). Claim 11 is rejected as being obvious over Kitamura et al. (EP 1120281) as applied to claim 8 in further view of Inoue et al. (US 6,620,508 B2). Claim 13 is rejected as being obvious over Kitamura et al (EP 1120281) as applied to claim 12 in further view of Chapman et al. (US 6,841,609 B2). Claim 14 is rejected as being obvious over Kitamura et al. (EP 1120281) as applied to claim 1, in further view of Miyamoto et al (JP 58-177390 A).

In addition, claims 12 and 13 are objected to and claim 15 is rejected under 35 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Objection to Claims 12 and 13

Claims 12 and 13 are objected to as Examiner states "silicium dioxide" should read "silicon dioxide." Applicant has corrected claims 12 and 13 by replacing "silicium dioxide" to read "silicon dioxide."

Accordingly, Applicant believes the Examiner's objections have been overcome and should be withdrawn.

Indefiniteness Rejection to Claim 15 and New Claim 16

Claim 15 is rejected under 35 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter of which applicant regards as the invention. Examiner states that Claim 15 would be allowable if rewritten to overcome this rejection and to include all of the limitations of the base claim and any intervening claims.

As currently amended, claim 15 defines a method wherein the nanocrystalline, nanoporous inorganic compound is TiO_2, Ti_2O_3, Nb_2O_5, WO_3, V_2O_5, MoO_3, MnO_2, HfO_2, TiS_2, WS_2, $TiSe_2$, Fe_2O_3, Fe_3O_4, RuO_2, RuS_2, MoS_2, WS_2, IrO_2, CeO_2, InO_2, TaO_2, ZnO, SnO_2, $BaTiO_3$, $SrTiO_3$, indium-tin-oxide, $LiMn_2O_4$, $LiNiO_2$, $LiCoO_2$ or $Li(NiCo)O_2$. These compounds are fully supported by page 9, lines 15-22 of the specification.

In addition, Examiner states that recitation of "specific surfaces," renders the claim indefinite. Applicant respectfully disagrees.

Applicant has added new claim 16 which depends from claim 15 to include the listed nanocrystalline, nanoporous inorganic compounds having specific surfaces between 10 m^2/g and 400m^2/g. Claim 16 is fully supported by page 9, line 10 of the specification.

The specific surface of a nanocrystalline, nanoporous inorganic compound is a property which is easily interpreted by someone skilled in the art. Applicant submits excerpts from *Ullmann's Encyclopedia of Industrial Chemistry*, Fifth Edition, Volume A5 (1986).(courtesy copy enclosed)

Chapter 5.2 titled Supports, on page 347 states:

> "During the first decades of this century, catalyst supports were derived from such *natural high-surface-area* materials as pumice, kieselguhr, asbestos, kaolin, and bauxite. Currently many *synthetic supports* are available in a wide range of surface areas, porosites, shapes, sizes and purities. The widely used supports include aluminas, silica gel, activated carbon, zeolites silicon carbide, titania, magnesia and various silicates. In addition to the finished formed supports, such precursors as various hydrated aluminas (α- or β-alumina, tryhydrates, α-alumina monohydrate) and colloidal silicas are also available. The production methods and properties of these materials are described in this encyclopedia under the individual keywords. Supports with high surface area are as a rule *microporous*."

Chapter 6.1, titled Physical Properties, on page 353 further states:

> "The *specific surface area* of a catalyst or support (in m^2/g) is determined by measuring the volume of gas, usually N_2, needed to provide a monomolecular layer according to the Brunauer-Emmett-Teller (BET) method."

The BET method is further described in the paper by S. Brunauer, P.H. Emmet and E. Teller, "Adsorption of Gases in Multimolecular Layers," *Journal of the American Chemical Society* 60, 309-319 (1938). (courtesy copy enclosed) The aforementioned references define "specific surfaces" and are accessible to someone skilled in the art. The term "specific surfaces" is fully supported in the specification at page 9, lines 15-22.

Accordingly, Applicant believes the Examiner's indefiniteness rejection has been overcome and should be withdrawn.

35 U.S.C. 102(b) Anticipation Rejections

Pending claims 1-5, 7-10 and 12 stand rejected as being anticipated by Kitamura et al. Applicant respectfully disagrees. Independent claim has been amended to include a limitation from the specification at page 9, lines 15-17.

As currently amended, independent claim 1 defines a method for coating a moving web with a coating solution containing one or more nanocrystalline, nanoporous inorganic compounds **selected from the group consisting of transition and metal oxides, chalcogenides and their Li inclusion complexes**, and one or more binders in a amount of from 0.5% to 30% by weight of the nanocrystalline, nanoporous inorganic compounds. An auxiliary coating solution is applied together with the coating solution to the web. The auxiliary coating solution contains at least one gelation-promoting ingredient which promotes the gelation of the coating solution containing the nanocrystalline, nanoporous inorganic compounds.

It is axiomatic that [f]or a prior art reference to anticipate in terms of 35 U.S.C. 102, every element of a claimed invention must be identically shown in a single reference." *In re Bond*, 910 F.2d 831, 15 USPQ 1566,1567 (Fed. Cir. 1990).

The Kitamura et al. reference does not provide a method for coating a moving web wherein the coating solution which contains

one or more nanocyrstalline, nanoporous inorganic compounds is **"selected from the group consisting of transition and metal oxides, chalcogenides and their Li inclusion complexes."**

Therefore, the Kitamura et al. reference does not contain every element of the present invention as described in independent claim 1 and thus is not anticipatory of the claims.

Accordingly, Applicants believe they have overcome the anticipation rejections of claims 1-5, 7-10 and 12.

35 U.S.C. 103(a) Obviousness Rejections

Claim 6 Stands rejected as being obvious over Kitamura et al (EP 1120281) as applied to claim 1, further in view of Ashida et al. (JP 2001-096900). Examiner states "it would have been obvious to one of ordinary skill in the art to modify the method of Kitamura so as to cool the coated substrate before drying so as to achieve improved transparency thereof, as taught by Ashida." Applicant respectfully disagrees.

Ashida mentions that an ink recording sheet on a transparent support containing silica is preferably cooled down to a temperature of 20°C, preferably 10°C, in order to improve its transparency (paragraph [0009]). The purpose of cooling down in the present invention is different: coating quality is improved even with non-thermo-reversible binders. Moreover, Boric acid is not mentioned as a hardening agent.

In view of this argument and the amendment made to Claim 1 which is distinguishable from the Kitamura et al. reference as

previously discussed, Applicant believes that the rejection of claim 6 is now deemed moot.

Claim 11 is rejected as being obvious over Kitamura et al. (EP 1120281) as applied to claim 8 in further view of Inoue et al. (US 6,620,508 B2).

In the present invention, the inorganic particles containing the elements of the rare earth series of the periodic system of the elements are restricted to aluminium oxide/hydroxide or pseudo-boehmite. These elements are incorporated into the crystal lattice and do not form a surface coating as taught by Inoue.

In view of the amendment made to Claim 1 which is distinguishable from the Kitamura et al. reference as previously discussed, Applicant believes that the rejection of claim 11 is now deemed moot.

Claim 13 is rejected as being obvious over Kitamura et al (EP 1120281) as applied to claim 12 in further view of Chapman et al. (US 6,841,609 B2). In view of the amendment made to Claim 1 which is distinguishable from the Kitamura et al. reference as previously discussed, Applicant believes that the rejection of claim 13 is now deemed moot.

Claim 14 is rejected as being obvious over Kitamura et al. (EP 1120281) as applied to claim 1, in further view of Miyamoto et al (JP 58-177390 A). The Examiner states that Kitamura does not explicitly state that the composition forms an electrically active/conductive layer and that Miyamoto teaches incorporating an electrically conductive into an ink-jet recording composition

to give an electrically conductive coated substrate. Applicant respectfully disagrees.

An electrically active layer which is taught by Applicant's invention is not a conductive layer. A conductive layer contains ingredients which make the layer conductive whereas an electrically active layer has many more functional properties.

In view of this argument and the amendment made to Claim 1 as previously discussed, Applicant believes that the rejection of claim 14 is now deemed moot.

In view of the above arguments and amendments to the claims, Applicant believes that Examiner's objections and rejections have been overcome. No new matter has been added. Applicant submits that this application is now in condition for allowance. Reconsideration of this application and allowance of pending Claims 1-16 is hereby requested.

Respectfully submitted,
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